

## **REMARKS/ARGUMENTS**

### **Specification Objections**

The Examiner objected to the specification as incorrectly listing a patent number in the "Background of the Invention" section. The applicant agrees and amended as suggested by the Office.

The Office requested clarification if priority to a provisional application is claimed. In response, the applicant added to the specification a paragraph pointing out that the present application is a national phase application which claims priority to a provisional application.

### **35 USC § 102**

**Claims 1, 5-8, and 12** were rejected under 35 USC § 102(b) as being anticipated by Madsen (U.S. Pat. No. 1,768,468). The applicant disagrees, especially in view of the amendments made herein. Among other things, amended claim 1 now expressly recites "...a bubble cap for co-current transport of a mixture of a liquid fluid and a gaseous fluid..." and expressly includes "...a mixture of a liquid fluid and a gaseous fluid in upward motion and disposed in the space...". These elements are clearly not taught by Madsen. Therefore, claims 1, 5-8, and 12 are not anticipated by Madsen.

**Claims 14-19** were rejected under 35 USC § 102(b) as being anticipated by Ballard (U.S. Pat. No. 3,218,249). The applicant again disagrees, especially in view of the amendments made herein. Among other elements, amended claim 14 expressly requires a "...skirt height of no less than 1.5 inches..." and "...a divider disposed in a space between the cap and the riser and extending to a length at least 50% of a distance measured between the top of the riser and the bottom of the cap..." Once more, these elements are not taught by Ballard. In fact, even before the present amendments, Ballard is entirely silent on the issue of skirt height.

The applicant would appreciate where the Office considers the claimed skirt height to be disclosed in the Ballard reference. Still further, the applicant points to the background section contrasting Ballards bubble cap with the presently claimed bubble cap. Based on these

differences and the additional element of a divider, claims 14-19 should not be properly held anticipated by Ballard.

**35 USC § 103**

The subject matter of the presently pending claims was commonly owned at the time the invention was made.

**Claims 2-4, and 9-10** were rejected under 35 USC § 103(a) as being obvious over Madsen. The applicant once more disagrees, especially in view of the amendments made herein. As already pointed out above, amended claim 1 (and claims 2-4 and 9-10 by virtue of their dependence on amended claim 1) include the express limitations "...a bubble cap for co-current transport of a mixture of a liquid fluid and a gaseous fluid..." and expressly includes "...a mixture of a liquid fluid and a gaseous fluid in upward motion and disposed in the space...".

Madsen not only fails to teach these elements, but clearly teaches against a co-current transport of a mixture of a liquid fluid and a gaseous fluid with an upward motion in the space between riser and cap. Madsen teaches an air purifier in which only air moves upwards and exits the cap into a layer of water. If water and air would be moving and disposed as presently claimed, Madsen's device would spray a work area with an air/water mixture rather than remove the air from the work area. Therefore, claims 2-4 and 9-10 are not obvious over Madsen.

**Claim 20** was rejected under 35 USC § 103(a) as being obvious over Ballard. The applicant again disagrees, especially in view of the amendments made herein. As amended, claim 14 (and claim 20 by virtue of its dependence on amended claim 14) expressly recites "...skirt height of no less than 1.5 inches..." and a "...divider disposed in a space between the cap and the riser and extending to a length at least 50% of a distance measured between the top of the riser and the bottom of the cap..." Neither of these elements is taught or suggested by Ballard. Obviousness, however, can only be properly established if each and every element is present. This is clearly not the case. Consequently, claim 20 should not be held obvious over Ballard.

**Claim 11** was rejected under 35 USC § 103(a) as being obvious over Madsen in view of Jacobs. The applicant disagrees and points to the defect of Madsen indicated above. Madsen can therefore not be a proper reference for an obviousness rejection.

Similarly, **claim 13** was rejected under 35 USC § 103(a) as being obvious over Madsen in view of Ballard or Bolles. The applicant once more disagrees and points to the defect of Madsen indicated above. Madsen can therefore not be a proper reference for an obviousness rejection.

### **REQUEST FOR ALLOWANCE**

Claims 1-20 are pending in this application. The applicant requests allowance of all pending claims.

Respectfully submitted,

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